

## SEWER SYSTEM CLOSED CIRCUIT TELEVISION TEAM – WASTEWATER

<b>DESCRIPTION</b>	The Sewer System Closed Circuit Television (CCTV) Team - Wastewater provides nondestructive CCTV services to facilitate sewer system inspections
<b>RESOURCE CATEGORY</b>	Public Works
<b>RESOURCE KIND</b>	Team
<b>OVERALL FUNCTION</b>	The Sewer System CCTV Team - Wastewater provides CCTV services to help sewer main inspectors identify repair and rehabilitation needs
<b>COMPOSITION AND ORDERING SPECIFICATIONS</b>	<ol style="list-style-type: none"> <li>1. Discuss logistics for deploying this team, such as working conditions, working conditions, length of deployment, safety, length of deployment, security, lodging, transportation, and meals, prior to deployment</li> <li>2. Requestor provides resources such as system maps indicating sewer main and manhole locations to help this team navigate the system; if possible, requestor provides a representative familiar with the affected sewer mains and manholes to accompany this team</li> <li>3. Requestor specifies whether confined-space training, certification, and equipment are necessary</li> <li>4. Requestor provides this team with relevant GPS coordinates when possible</li> <li>5. CCTV equipment for this team may vary based on environment</li> <li>6. Requestor provides external support, such as vehicle fuel and power for phones, computers, and other rechargeable devices</li> <li>7. Requestor specifies any necessary safety qualifications and equipment, such as trenching and shoring capabilities</li> </ol>

Each type of resource builds on the qualifications of the type below it. For example, Type 1 qualifications include the qualifications in Type 2, plus an increase in capability. Type 1 is the highest qualification level.

COMPONENT	SINGLE TYPE	NOTES
<b>MINIMUM PERSONNEL PER TEAM</b>	2	Not Specified
<b>MANAGEMENT AND OVERSIGHT PERSONNEL PER TEAM</b>	1 - National Incident Management System (NIMS) Type 1 Wastewater Operations Team Leader	Not Specified
<b>SUPPORT PERSONNEL PER TEAM</b>	1 - NIMS Utility Worker Specialist - Water Sector Infrastructure	The NIMS Utility Worker Specialist - Water Sector Infrastructure can be a welder, electrician, or mechanic. Requestor specifies worker specialty based on mission needs.
<b>SPECIALIZED EQUIPMENT PER TEAM</b>	<ol style="list-style-type: none"> <li>1. Push rod or robotic crawler</li> <li>2. Cable, 400 feet minimum</li> <li>3. System maps</li> <li>4. Hand tools as necessary for the task and location</li> <li>5. Gas detection device</li> <li>6. Traffic management cones or other traffic control devices</li> </ol>	Hand tools may include tape measures, screwdrivers, bolt cutters or other cutting tools, assorted wrenches, shovels, crowbars or lift tools, chainsaws, and garden trowels.

COMPONENT	SINGLE TYPE	NOTES
<b>PERSONAL PROTECTIVE EQUIPMENT (PPE) PER TEAM MEMBER</b>	PPE may include: 1. Hard hat 2. Reflective vest 3. Gloves 4. Respiratory devices 5. Protective clothing 6. Protective footwear 7. Protective shields 8. Flashlight	PPE is mission-specific and may vary by work environment; it includes protective footwear, protective clothing for skin exposure, eye and ear protection, respirators, gloves, and masks.
<b>ELECTRONICS EQUIPMENT PER TEAM</b>	1. Laptop computer 2. GPS 3. Televising equipment 4. Wireless internet connection device	Consider other equipment and supplies as necessary based on ordering specifications.
<b>COMMUNICATIONS EQUIPMENT PER TEAM</b>	1. Cell phone 2. Portable two-way radio	1. Consider alternate forms of communication, such as satellite phones, based on the mission assignment and team needs. 2. Requestor provides radio specifications. 3. Provider supplies necessary chargers and backup batteries for battery-powered portable equipment.
<b>TRANSPORTATION EQUIPMENT PER TEAM</b>	1 - Light-duty vehicle and towable trailer with mounted televising equipment	Vehicle must be capable of traversing rough terrain, flood conditions, and adverse environmental conditions, and must carry equipment necessary for maintaining vehicle operation.

## NOTES

Nationally typed resources represent the minimum criteria for the associated component and capability.

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## REFERENCES

1. FEMA, NIMS 508: Repair Teams Sewer Mains – Wastewater
2. FEMA, NIMS 509: Utility Worker Specialist – Water Sector Infrastructure
3. FEMA, NIMS 509: Wastewater Operations Team Leader
4. FEMA, National Incident Management System (NIMS), October 2017
5. FEMA, National Response Framework, June 2016
6. Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) Part 1910.146: Permit-Required Confined Spaces, latest edition adopted